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FACT SHEET

HELENA, MONTANA 59620

CONOCO INC, BILLINGS LAND FARM, MONTANA
Hazardous Waste Treatment/Disposal Draft Permit
September 1, 1988

BACKGROUND

In 1976, Congress enacted the Resource Conservation and Recovery Act, also known as RCRA. In 1984, The Solid and Hazardous Waste Bureau of the Montana Department of Health and Environmental Sciences (DHES) was authorized by the EPA to manage the hazardous waste program in Montana. The act gives the DHES and EPA authority to manage hazardous wastes by:

- (1) Developing standards to be followed by generators, transporters, and facilities which treat, store, and dispose of hazardous waste;
- (2) Allowing enforcement of regulatory standards for such facilities through a permitting process.

In 1980, Conoco INC. filed notice with EPA for an "interim status" or temporary permit to treat and dispose of hazardous refinery wastes. The temporary permit required Conoco to inform EPA of the amount and type of hazardous waste generated and processed, to describe and map the facility, and to issue annual updates. Installation of a groundwater monitoring system for treatment and disposal units was also required. Hazardous waste management activities have continued under the temporary permit since then.

In December 1983, DHES requested submittal of a comprehensive permit application, or a "Part B" application, from Conoco. This permit application was submitted by Conoco in September, 1984. Since that time, both EPA and DHES have conducted reviews and deficiency notices of the application. Conoco has responded in turn with revisions, additions, and information from new studies. With the issuance of the draft permit, DHES deems the application to be complete.

The comprehensive draft permit imposes additional requirements on Conoco for hazardous waste operations, monitoring, closure, and reporting. The specific conditions of the draft permit provide

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greater protection to the public health and environment than the general terms of the temporary land treatment permit under which Conoco has been operating.

FACILITY DESCRIPTION

The Conoco INC Land Farm Unit is located 12 miles north of Billings on Alexander Road, Yellowstone County. The land treatment Unit is composed of 7 separate sectors having treatment areas of approximately two acres each. (See map). The draft permit allows for land treatment of the following wastes generated by the Conoco Billings Refinery.

Hazardous Wastes

- Dissolved Air Flotation (DAF) Float
- API separator sludge

Non-hazardous Wastes

- cooling tower sludge
- sludges from the bottom of crude, intermediate, and product tanks
- holding pond waste
- soil or gravel contaminated through spillage of petroleum products

LAND TREATMENT OF REFINERY WASTES

Land treatment of refinery wastes has been used in the United States since the 1970s. It has been demonstrated to be an effective technology, if it is operated and monitored carefully. The wastes are spread onto specially maintained cultivated fields. With controlled application rates, tillage, pH and nutrient control, the oily wastes are volatilized and broken down biologically. Micro-organisms in the topsoil utilize the organic compounds in the wastes as a food source and break the compounds down to carbon dioxide, water, and soil humus. Metals in the wastes are not degraded, but are immobilized within the first foot or two of soil, and do not migrate into deeper soils or groundwater if the land treatment unit is managed properly.

In order to guard against inadvertent contamination of deeper soils or groundwater, the draft permit requires routine sampling of soils, groundwater, and soil-pore water in and around the land treatment areas. If contamination is discovered below a five-foot depth, or is detected in groundwater, the draft permit requires Conoco to take action to correct the problem and revise operational activities to prevent problems in the future.

THE CONOCO INC LAND FARM

Conoco initiated land treatment suitability studies at the Alexander Road site in 1971. Oily wastes were first applied in 1973. Since that time various land treatment suitability studies at each of the seven treatment areas have shown that land treatment at the Alexander Road site is an effective and environmentally safe treatment method for the refinery wastes listed in the draft permit.

The seven Conoco land treatment areas have a combined treatment area of 13.7 acres. In the past 2 years, an average of 1666 tons/year of hazardous waste from the Conoco Refinery has been treated at the land farm. The wastes are comprised mainly of water, oil and dirt. Wastes are applied throughout the year, weather and road conditions allowing.

When the land farm is to be closed, Conoco will be required to continue to treat the soils to maximize degradation, then seed the areas. Groundwater and soils will continue to be monitored, although less frequently, for thirty years after closure.

CONDITIONS

All conditions of the draft permit are based on requirements in Title 16, Chapter 44, ARM. These rules, which mirror federal requirements for obtaining a permit to operate a hazardous waste management facility, are adopted under the Montana Hazardous Waste Act (MHWa). MHWa was enacted to implement in Montana the federal hazardous waste program established by RCRA. The permit application, consisting of parts A and B, serves as a basis for the conditions in this draft permit. The facility must be operated as specified in the application and in the conditions of this permit to be in compliance. Permit noncompliance could result in enforcement action or permit termination.

The draft permit contains six "modules" or chapters, that focus on specific concerns:

Module I	-- Standard Conditions
Module II	-- General Facility Conditions
Module III	-- Land Treatment Units
Module IV	-- Groundwater Monitoring
Module V	-- Closure/Post-Closure
Module VI	-- Special Conditions
	Treatment Zone Separation
	Demonstration

Module VI, Special Conditions, is unique to this draft permit. This module requires Conoco to demonstrate to DHES by October 21, 1988, that portions of the Land Treatment Unit are suitable for land treatment. DHES is concerned that, in some areas the water



table is too close to the ground surface, making the area unsuitable for land treatment. Conoco will only be able to use those areas of the Land Farm which have a satisfactory separation between the treatment zone and the water table.

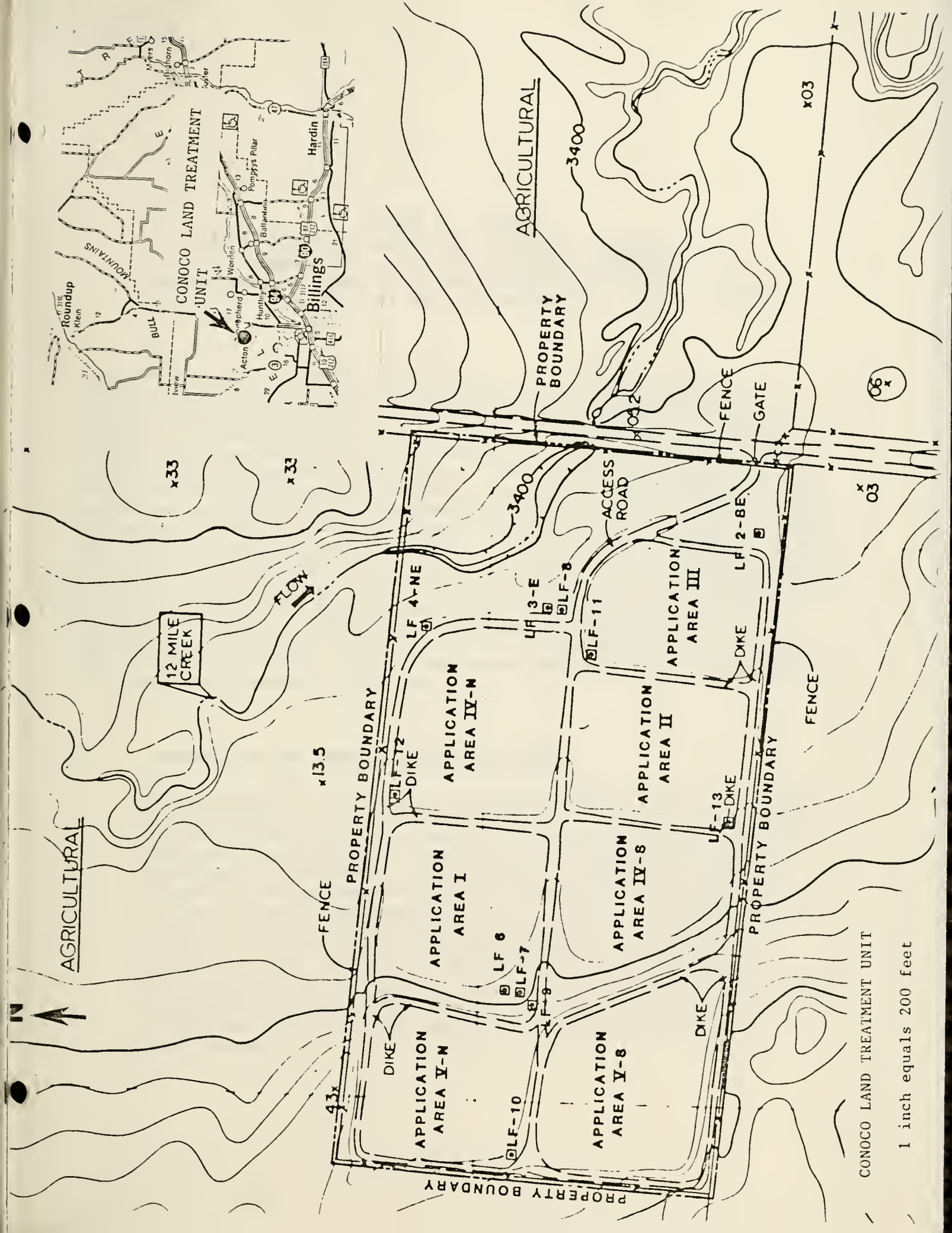
TERM OF PERMIT

The draft permit proposes a term of ten years for the permit. DHES is required under ARM 16.44.111 to review in detail the portions of the permit that apply to land treatment five years after the date of issuance, and to modify those portions of the permit as necessary.

DHES and Conoco recognize that the land disposal restrictions of the federal 1984 RCRA amendments may prohibit land treatment of refinery wastes beyond 1990. Such restrictions would override Conoco's ability to continue land treatment under a state-issued permit.

PUBLIC PARTICIPATION

MHWA requires a 45-day period for public comment on each draft permit. The public comment period for the Exxon permit will extend through October 16, 1988. A notice will be published in the Billings Gazette and will also be broadcast over local radio stations. A public hearing will be held on October 13, 1988, at the Student Union building on the Eastern Montana College Campus in Billings. The draft permit has been made available for public review during the comment period at the Yellowstone City-County Sanitarian's Office, Room 309, Courthouse (256-2757), and at the Billings office of the Montana Department of Health, Room 305, Petro Hall, Eastern Montana College Campus (657-2618).



12 MILE CREEK

AGRICULTURAL

AGRICULTURAL

PROPERTY BOUNDARY

PROPERTY BOUNDARY

PROPERTY BOUNDARY

FENCE

FENCE

GATE

ACCESS ROAD

APPLICATION AREA IV-N

APPLICATION AREA II

APPLICATION AREA III

APPLICATION AREA I

APPLICATION AREA IV-S

APPLICATION AREA V-S

APPLICATION AREA VI

PROPERTY BOUNDARY

CONOCO LAND TREATMENT UNIT

1 inch equals 200 feet



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DRAFT FACT SHEET
FOR A HAZARDOUS WASTE MANAGEMENT FACILITY PERMIT
CONOCO INC., CONOCO BILLINGS LANDFARM
SHEPHERD-ACTON ROAD 12 MILES NORTH OF BILLINGS, MONTANA
EPA ID. NO. MTD000818096

This fact sheet is for the Environmental Protection Agency's (EPA's) portion of the full draft Resource Conservation and Recovery Act (RCRA) permit which EPA and the State of Montana intend to issue to Conoco Inc., for operation of its hazardous waste land treatment facility located 12 miles north of Billings, Montana on the Shepherd-Acton Road. The full RCRA permit is comprised of EPA's permit, which addresses the provisions of the Hazardous and Solid Waste Amendments of 1984 (HSWA), and the State of Montana's permit, which addresses that portion of RCRA for which the State of Montana is authorized. Some of the provisions in the EPA portion of the permit are also included in the Montana State portion of the permit, since the State of Montana is in the process of amending its hazardous waste regulations to include relevant HSWA requirements. The State of Montana is authorized to administer and enforce those portions of RCRA in effect prior to the enactment of HSWA. This fact sheet was prepared in accordance with the requirements of 40 CFR 124.8.

A. PURPOSE OF THE PERMIT ISSUANCE PROCESS

The purpose of the permit issuance process is to afford the United States Environmental Protection Agency, interested citizens and other governmental agencies the opportunity to evaluate the ability of the Permittee to comply with the applicable requirements promulgated under the Resource Conservation and Recovery Act, as amended by the Hazardous and Solid Waste Amendments of 1984. EPA is required to prepare a draft permit which sets forth in one concise document all the applicable requirements with which the Agency intends to require the Permittee to comply with during the duration of the permit. The public is given forty-five (45) days to review and comment on the draft permit conditions prior to EPA taking any final action on EPA's draft permit.

C. HAZARDOUS AND SOLID WASTE AMENDMENTS

CONTINUING RELEASES AT PERMITTED FACILITIES

Background

One of the most important provisions of the Hazardous and Solid Waste Amendments of 1984 is the requirement for corrective action for continuing releases. This provision is established in Section 3004(u) of RCRA, promulgated as regulation of 40 C.F.R. 264.101, 50 Federal Register 28747 (July 15, 1985), as follows:

"Standards promulgated under this section shall require, and a permit issued after November 8, 1984 (the date of enactment of the Hazardous and Solid Waste Amendments of 1984) by the Administrator or a State shall require corrective action for all releases of hazardous waste or constituents from any solid waste management unit at a treatment, storage, or disposal facility seeking a permit under this subtitle, regardless of the time at which waste was placed in such unit. Permits issued under Section 3005 (of RCRA) shall contain schedules of compliance for such corrective action (where such corrective action cannot be completed prior to issuance of the permit) and assurances of financial responsibility for completing such corrective action."

The intent of Congress in establishing this permit requirement was to correct a perceived shortcoming in the existing statute and RCRA regulations, which allowed operating permits to be issued to facilities at which environmental contamination is occurring or has occurred, without the permit addressing that contamination. All permit applicants must now (a) identify all solid waste management units (SWMUs) at the facility, (b) identify any releases that have occurred or are occurring from those units, (c) take appropriate corrective action to clean up those releases, and (d) demonstrate financial assurance for those corrective actions. The provision on continuing releases was effective on the date of enactment (November 8, 1984). Thus, a permit issued after that date must address this provision.

Currently, there are no solid waste management that have been identified at the Conoco Billings Landfarm. The EPA permit will require that Conoco Inc. implement a corrective action program if solid waste management units are created or discovered at the facility in the future.

The basic standard for imposing corrective action at the Conoco Billings Landfarm is protection of human health and the environment. The EPA permit will address corrective action if there is a future release at the facility that poses a threat to human health and the environment. A substantial threat to human health and environment is assumed if there is a likelihood of a hazardous waste or hazardous constituent release from a solid waste management unit into the air, surface water, ground water, or soil.

Implementation

The process of implementing Section 3004(u) will take place in three stages, with each stage consisting of several specific steps, as follows:

1. Assessment of need for corrective action (RCRA Facility Assessment).
 - a. Submission of Preliminary Review information by applicant.
 - b. Evaluation of Preliminary Review information submitted by applicant to determine the possibility or extent of releases.
 - c. Performance of a Visual Site Inspection by the Agency.
2. Existing data evaluation and development of proposed programs of corrective action.
 - a. Verification Investigation by owner/operator to identify or verify releases.
 - b. RCRA Facility Investigation, if necessary, by owner/operator to characterize releases.
 - c. Development of a proposed program of corrective measures, if necessary, and cost estimate.
3. Selecting and performing corrective action.
 - a. Establishing the program for corrective action.
 - b. Demonstration of financial assurance.
 - c. Conducting corrective action.

OTHER PROVISIONS

A number of other provisions in HSWA became effective November 8, 1984. Provisions concerning the standards for owners and operators of hazardous waste management facilities and provisions concerning general permit conditions were promulgated as final regulations on July 15, 1985 (50 Fed. Reg. 28742). Two provisions, in addition to that pertaining to corrective actions for continuing releases, apply to this permit.

Section 3005(h) of RCRA (Section 224 of HSWA) requires that, as of September 1, 1985, Permittees of hazardous waste management facilities located on the premises of the generator must certify that certain waste minimization practices have been established. This requirement has been incorporated into the regulations concerning the Operating Record of the facility [40 C.F.R. 264.73(b)(9)] (see Permit Condition I.F.). Regulation 40 C.F.R. 270.30(j)(2), 50 Fed. Reg. 18752 (July 15, 1985), was revised to clarify that this operating standard must be a condition of the Permit (see Permit Conditions I.H.2 and I.I.7.b.).

This permit also addresses the relevant provisions of 40 CFR 268, restrictions on the land disposal of hazardous wastes. If the Permittee generates a hazardous waste subject to land disposal restrictions, the waste must be tested using the test method applicable to the specific waste in accordance with 40 CFR 268 Subpart C or by using knowledge of the waste to determine if the waste is restricted from land disposal.

D. FACILITY DESCRIPTION

GENERAL

The Conoco Billings Landfarm is located on approximately 14 acres, twelve miles north of Billings, Montana on the Shepherd-Action Road in Yellowstone County. The Landfarm is located at latitude 45° 55' 46" North and longitude 108° 31' 53" West.

The facility is a land treatment facility that treats petroleum refinery oily wastes generated at the Conoco Billings Refinery in Billings, Montana. No other wastes are treated at this facility and no other treatment units or processes exist at the site.

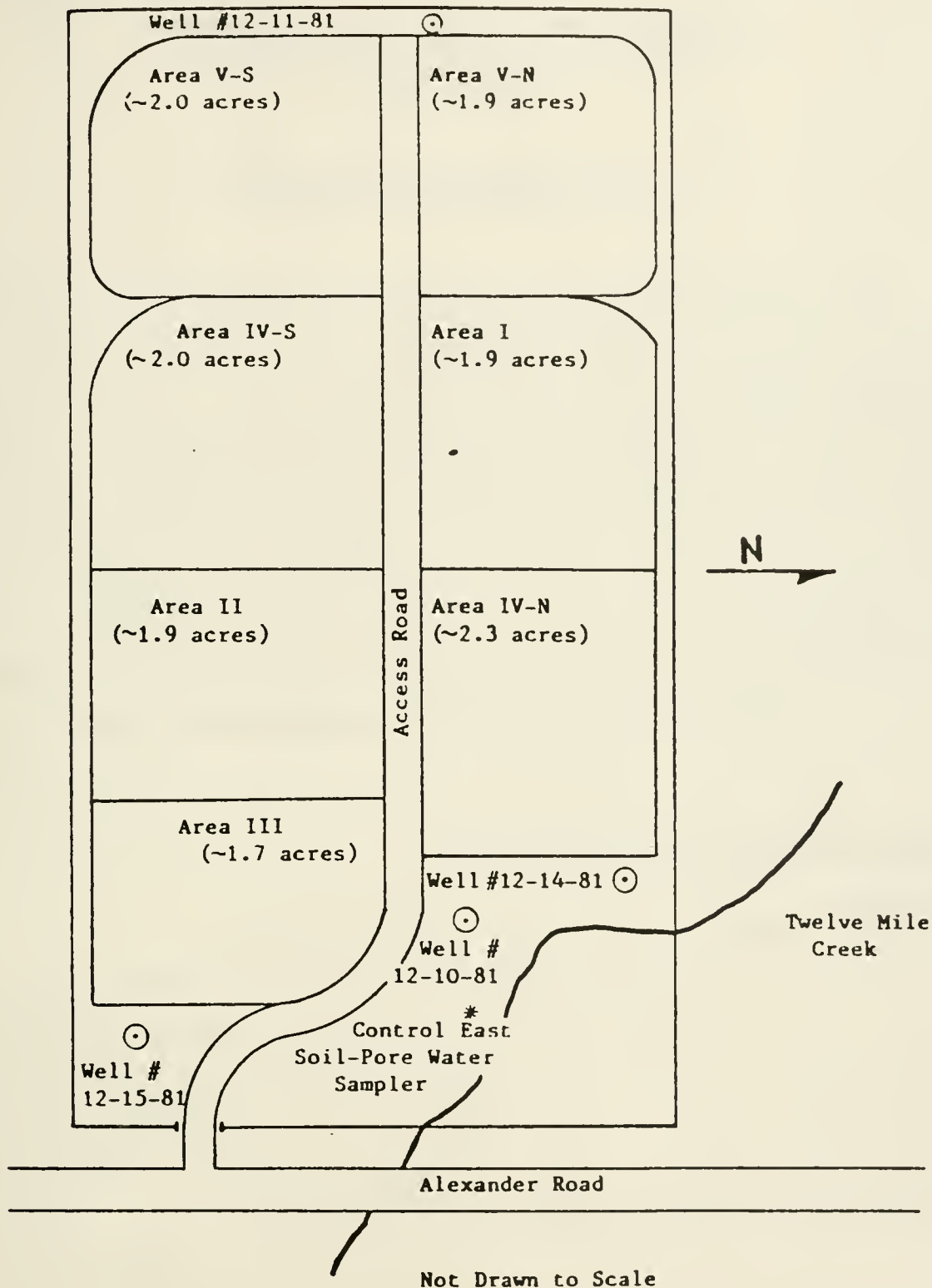
A diagram of the Conoco Billings Landfarm is included as an attachment to this Fact Sheet.

E. PERMIT ORGANIZATION

The permit is divided into two parts as outlined below:

<u>Part</u>	<u>Topic</u>
I	Standard Conditions
II	Specific Conditions

Part I contains conditions which apply to all hazardous waste facilities. Part II pertains specifically to the hazardous waste facilities at the Conoco Billings Landfarm, located north of Billings, Montana. Both Parts I and II are administered by EPA.



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 363.7287 Hazardous Waste
 H7cLfd Bureau
 1988 Conoco Inc.,
 Billings Land Farm
 draft hazardous
 waste permit

DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES
 Cogswell Building, Helena, Montana 59601
 (406)449-3946

PRELIMINARY ENVIRONMENTAL REVIEW

Division/Bureau Environmental Sciences Division/Solid & Hazardous Waste Bureau

Project or Application Draft Montana Hazardous Waste Permit. Conoco INC, Billings

Description of Project A draft comprehensive permit has been prepared to allow Land Treatment Unit

Conoco INC, to treat, and dispose of hazardous waste generated at the Billings

refinery. Waste management activities include land treatment of refinery wastes at a

site about 15 miles north of Billings on Alexander Road. The activities have been

ongoing for a number of years under a temporary permit, and the comprehensive permit

will place more conditions on operations and monitoring. See the attached fact sheet

for more information. PER comments are attached on separate pages.

POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

	Major	Moderate	Minor	None	Unknown	Comments on Attached Pages
1. Terrestrial & aquatic life and habitats			X			X
2. Water quality, quantity and distribution			X			X
3. Geology & soil quality, stability and moisture			X			X
4. Vegetation cover, quantity and quality			X			X
5. Aesthetics		X				X
6. Air quality			X			X
7. Unique, endangered, fragile, or limited environmental resources				X		
8. Demands on environmental resources of land, water, air & energy			X			X
9. Historical and archaeological sites					X	

POTENTIAL IMPACTS ON HUMAN ENVIRONMENT

	Major	Moderate	Minor	None	Unknown	Comments on Attached Pages
1. Social structures and mores				X		X
2. Cultural uniqueness and diversity				X		X
3. Local and state tax base & tax revenue				X		X
4. Agricultural or industrial production			X			X
5. Human health			X			X
6. Quantity and distribution of community and personal income				X		
7. Access to and quality of recreational and wilderness activities				X		
8. Quantity and distribution of employment				X		
9. Distribution and density of population and housing				X		
10. Demands for government services			X			X
11. Industrial & commercial activity			X			X
12. Demands for energy				X		
13. Locally adopted environmental plans & goals				X		
14. Transportation networks & traffic flows				X		

Other groups or agencies contacted or which may have overlapping jurisdiction Environmental Protection Agency, Water Quality Bureau, Air Quality Bureau

Individuals or groups contributing to this PER. Alice Stanley, Barbara Jones

Recommendation concerning preparation of EIS not recommended; the process of preparing a comprehensive permit application addresses physical environmental concerns

PER Prepared by: Alice Stanley, Barbara Jones

Date: September 1, 1988

PRELIMINARY ENVIRONMENTAL REVIEW
CONOCO INC, BILLINGS LAND FARM
DRAFT HAZARDOUS WASTE PERMIT

POTENTIAL IMPACT ON THE PHYSICAL ENVIRONMENT

1. Terrestrial and aquatic habitats:

The proposed permit conditions will provide improved protection of aquatic and terrestrial species by requiring:

- monitoring of Twelve Mile Creek (a nearby natural intermittent stream) for impacts by the land treatment unit
- closure of any treatment areas overlying high groundwater. This will reduce the possibility of near surface groundwater from discharging contaminants to Twelve Mile Creek
- All units are outside of the Twelve Mile Creek floodplain. The treatment areas have been diked to control run-on and run-off during a 25-year, 24-hour storm event.

2. Water quality, quantity and distribution:

There is a potential for impact on groundwater quality. A monitor well network is in place around the land treatment unit; each well is sampled on a regular basis for hazardous constituents and general water quality indicator parameters. No hazardous constituents have been detected to date in groundwater.

The proposed permit conditions will reduce the potential for groundwater contamination because:

- The number of groundwater monitoring parameters is increased to include more hazardous compounds
- Soil pore water and soils monitoring frequency and parameters will be increased and standardized
- Waste application rates and content will be limited and reported on a more frequent basis
- Closure and post-closure monitoring requirements are defined

3. Geology and soil quality, stability and moisture:

There is a potential impact on soil quality due to waste applications. Conservative application rates are established and soil sampling rates are established and

soil sampling is required in the draft permit, to prevent overloading of hazardous organics or metals in soils.

Because 90 to 98% of the content of applied waste is water localized saline seep conditions near Twelve Mile Creek will be exacerbated during the operational period of the facility. However, post-closure requirements will help to reduce local saline seep occurrences relative to nearby farming practices.

- Closure conditions in the proposed permit require in-place treatment and monitoring soils until maximum degradation of hazardous organic constituents is achieved.

4. Vegetative cover, quantity, and quality:

It is likely that EPA's land disposal restrictions will require Conoco to close the land farm within two years. Following in-place treatment at closure, a post-closure permit condition requires placement and maintenance of a vegetative cover on the land treatment areas. This condition can be expected to improve vegetative cover.

5. Aesthetics:

The entire land farm comprises about 20 fenced acres. The site is on an arid bench near dryland farmland. The land treatment facility is not visually aesthetic relative to the surrounding country side.

6. Air quality:

During waste application, odors can be detected as hydrocarbons are volatilized. The land treatment unit does not violate the Montana "odor rule" (ARM 16.8.1427).

8. Demands on environmental resources of land, water, air, and energy:

Because a vegetative cover must be maintained for at least 30 years after closure on the land treatment unit, local saline seep conditions can be expected to improve relative to the areas impacted by nearby agricultural practices.

Local land treatment of refinery wastes is energy efficient relative to the alternatives which include shipping wastes out-of-state or incineration.

POTENTIAL IMPACTS OF THE HUMAN ENVIRONMENT

1-4. Social structures, cultural uniqueness, tax base and revenue, agricultural or industrial production:

Hazardous waste management practices are now only a small part of ongoing industrial activity at Conoco. Issuance of a comprehensive hazardous waste permit will not have an impact on the refinery in general, and therefore will not have an appreciable impact on community life.

5. Human health:

Regulating Conoco's land farm through a comprehensive permit may improve human health in the immediate area because any release of hazardous contaminants can be expected to be detected sooner under the proposed permit's environmental monitoring plan. Operational conditions written into the proposed permit will also reduce the likelihood of accidental contaminant releases to the environment.

Continued operation of a hazardous waste treatment unit will pose more of a threat to the health of operating personnel and state inspection officers than if it weren't there at all. However, as long as safety conditions in the proposed permit are adhered to, human health will not be impacted adversely.

10. Demands for government services:

Although Conoco has a mutual aid agreement with the City of Billings Fire Department for services during emergencies, any city fire control materials used must be repaid in kind by Conoco. The agreement states that city personnel and equipment can be withdrawn to respond to another emergency within the city's jurisdiction. Additionally, Conoco has its own fire and emergency brigade, and mutual aid agreements with other local refineries.

Permitting Conoco's land treatment unit may increase the workload for State Health Department and EPA personnel.

11. Industrial and commercial activity:

The permit will allow industrial activity to maintain its present capacity at the refinery because of reduced uncertainty about waste management options.

